Variability of coastal turbidity and chlorophyll-a distribution in the Basque coast between 2005-2010 period from MODIS/AQUA observations.

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➢OBJECTIVE

To assess the spatio-temporal distribution and temporal trends of Total Suspended Matter (TSM) and chlorophyll-a (Chl-a) in the basque coastal shelf.

➢METHODOLOGY

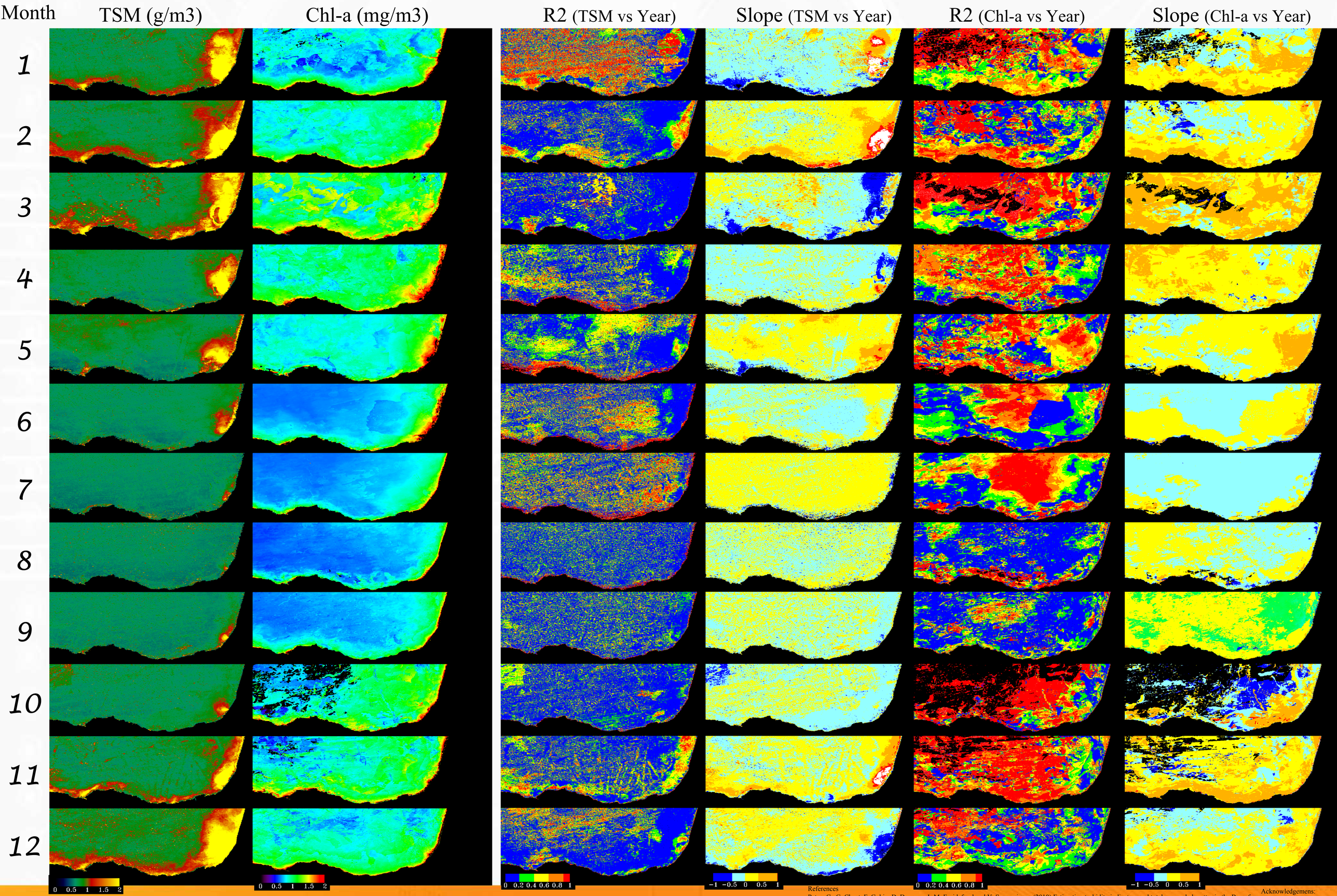
TSM and Chl-a images were obtained from MODIS-Aqua data using the local algorithms from Petus et al., (2009) and Novoa&Chust (submitted).

Monthly climatological images were obtained from monthly images for the period 2005-2010.

Linear regressions for TSM and Chl-a against Year data were calculated for each pixel and remapped into images to estimate temporal trends distributions.

➢RESULTS

✓Higher TSM values are found on-shelf around the Adour outflow area in all months except for summer months.
✓High TSM values are also registered on spanish shelf during winter months.
✓Chl-a values distribution are also important in off-shelf areas during winter months.
✓In close-to-coast areas, higher chl-a values are found in spring and fall, mainly around river discharges.
✓Whereas on the spanish shelf chl-a conc. are similar in both seasons, in front of Adour, Chl-a is higher in spring than in fall.
✓R2 values for Chl-a linear regressions are higher than for TSM regressions.
✓R2 for TSM regresions show spatial patterns in some months, thus trends are not evenly distributed in the area.
✓TSM slopes show positive values in the Adour area during months 2,4,5 and 11, and negative values in months 3 and 12.
✓Around the Nervión outflow there are negative slopes during months 1,3 and 5 and positive slope on month 2.
✓In Feb and Nov there is a TSM (+) trend on the shelf. Negative slopes are found mainly in Dec, Jan & March.
✓For Chl-a, slopes have (+) values in winter in all areas. In summer, slopes are very close to 0. Most (-) slopes are found in fall.



References
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